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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,738	10/13/2000	Anil K. Agarwal	A7451	6027

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EXAMINER

LEE, CHI HO A

ART UNIT PAPER NUMBER

2663

DATE MAILED: 03/05/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/689,738

Applicant(s)

AGARWAL ET AL.

Examiner

Andrew Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 December 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

2. Claim 1, 3, 4, 6, 9-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Donahue et al U.S. Patent Number 6,101,180.

Re Claim 1, fig. 2 teaches plurality of clients/terminals (A, B) connected to routers (R1, R2) wherein the system supports satellite IP multicasting; fig 5 teaches IPMS 120 (route server) that maintains routing table for establishing multicast sessions for plurality of routers 170 (See col. 12, lines 40 +); fig.15 teaches the NOC 472 (a controller) to allocate channels (broadcast burst) based on requests from host and ISP server (a route server) (See col. 21, lines 21-50).

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Re Claim 3, refer to Claim 1, IP multicast service is initiated by requesting host and established by the ISP server and controller, then the host is joined into the multicast session, and thereafter maintained by the host.

Re Claim 4, refer to Claim 1, wherein once IP multicast session is initiated, the terminals/clients listen to the broadcast information from the satellite.

Re Claim 6, NOC 472 supports Point-to-point transmission.

Re Claim 9, refer to Claim 1, wherein routing information is exchanged between sub-router and ISP server.

Re Claims 10, 11, refer to Claim 9, wherein the routing information is an multicast address.

Re Claims 12, 13, refer to Claim 1, IP multicasting supports DVMRP and PRM (See col. 13, lines 48-51)

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 5, 7, 8, are 14-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Donahue et al U.S. Patent Number 6,101,180 in view of Liebowitz et al U.S. Patent Number 5,812,545.

Re Claims 2 and 14, refer to Claim 1, Donahue et al teaches in fig. 21, IPMS 120 (a common route server) for maintain routing information for Access routers 1 & 2 (local

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routers) wherein the IPMS wherein it is apparent that the IPMS 120 is connected to a administrative computer (master terminal) (See col. 35, lines 34 +). Donahue et al fails to explicitly teach allocated burst through the selection of one slot in a TDMA for broadcast communication. However, Liebowitz et al teaches a PCD (a controller) which operates the switch to organizes bursts in at least one of a plurality of time slots (See col. 2, lines 48-52). One skilled in the art would have been motivated by Liebowitz et al to deploy a digital wireless multiplexing system so that a communication channel (slot) is only used a fraction of the total number of time slots, in a periodic fashion, thus allowing other users to access the same spectrum on a time-shared basis. Therefore, it would have been obvious to one ordinary skilled incorporate the teaching of Liebowitz et al into the teaching of Donahue et al.

Re Claim 5, refer to Claim 1, wherein the PCD allocates burst using the Burst Plan (See col. 2, line 52).

Re Claim 7, refer to Claim 4, wherein the PCD dynamically allocates time slots according to the user bandwidth requests not exceeding specific amount of capacity.

Re Claim 8, refer to Claim 3, wherein the FAD monitors for stream requests and releases in every frame received from user terminal devices, wherein the change in the multicast traffic volume is monitored by the FAD and reported to the MT.

Re Claim 15, refer to Claim 14, Donahue et al in view of Liebowitz et al teaches in fig. 1, the file server 100 (a source) transmitting IP multicast packet via satellite to IMPS server 120 (route server); 120 forward/broadcasts the received IP packets to the members of the multicast group clients; wherein in view of Liebowitz, the broadcast

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supports TDMA time slots; multicast traffic can be pruned in the event group member leaves a group (See col. 35, 34 +). Donahue et al in view of Liebowitz et al fails to explicitly teach "refining a receiving set of terminals...based on the prune message". However, One skilled in the art would have been motivated to refine/update the routing tables by the prune messages to monitor for the current "joined" members in the multicasting sessions. Hence, by using the prune message for indicating a member has left a multicast session, bandwidth associated with the connection can be conserve. Therefore, it would have been obvious to one ordinary skilled update the routing tables based on the prune messages.

Re Claim 16, refer to Claim 14, Donahue et al teaches in fig.21, the client transmitting a join message to access router to IMPS 120 (router server) to be transmitted (unicasting IP multicasting packet) to a satellite (rendezvous point), wherein the satellite facilitates multicasting/broadcasting of the IP multicast packets to the terminals; IMPS 120 updates the join request in its table (updating said routing information).

Response to Arguments

5. Applicant's arguments with respect to claims 1-16 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

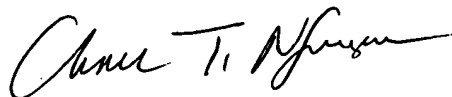
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Lee whose telephone number is 703-305-1500. The examiner can normally be reached on Monday to Friday from 8:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on 703-308-5340. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

AI

February 27, 2003



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